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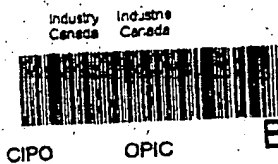
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2004/01/21

023 - 04

B000173923

Emma Forte
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50 Victoria Street,
Gatineau Quebec
K1A 0C9

Dear Ms. Forte:

RE: **Canadian Application 2,321,937**
Spiel Associates, Inc.

Further to our telephone conversation I enclosed the Protest by fax. A clean confirmation copy will be forwarded by mail.

Yours truly,

ADE & COMPANY
PER:

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EXAMINER Daniel Weslake
CLASSIFICATION B42B-5/12
APPLICANT Spiel Associates, Inc.
SERIAL NO 2,321,937
FILED October 2, 2000
FOR COMBINATION PLASTIC SPIRAL FORMING MACHINE AND
SEMI-AUTOMATIC PLASTIC BINDING MACHINE

PROTEST

Commissioner of Patents
Hull, Quebec
K1A 0E1

Dear Sir:

We hereby file a protest against the above application. The reason for this protest is that a litigation has been filed by the Applicants Spiel Associates, Inc (hereinafter referred to as "Applicants") in USA based upon the corresponding US Patent. The allegations in this litigation are based upon an interpretation of those claims now presented in the Application by the Applicants which is broader than appears to be a proper interpretation. Thus the Applicants themselves appear in the arguments presented in the Application to be presenting a narrow interpretation of the claims. However they themselves in the US litigation allege that a broad interpretation must be given to the same claims. If such a broad interpretation is possible and even proposed by the Applicants themselves, then it MUST be considered in the present examination of the validity of those claims.

These broad and narrow interpretations arise due to inherent ambiguity in

the claims now presented in contravention of Section 27(4) of the Patent Act.

It is essential therefore that the meaning of the claims be made clear so that no ambiguity remains.

If interpreted broadly as the Applicants propose in the litigation, the claims are clearly invalid.

Even if interpreted narrowly, or amended so that only a narrow interpretation can be sustained, it is submitted that the claims are invalid in view of the new prior art cited herein.

ADDITIONAL PRIOR ART.

1. US Patent 5,806,676 (Wasgien) issued September 1998.
2. US Patent 4,382,586 (Reese) issued May 1983.
3. US Patent 3,944,049 (Graybill) issued March 1976.
4. US Patent 6,000,897 (DesJarlais USA) issued December 1999.
5. Canadian Patent Application 2,320,527 (DesJarlais Canada) filed September 22nd 2000.
6. An Operator's Manual for the Renz Automatic Plastic Spiral Winding and Length Cutting Machine (Renz) which was published July 2, 1990. A copy is attached.

PERTINENCE OF THE PRIOR ART

Wasgien

This patent discloses a conveyor for transporting spiral binding combs from a forming machine to a binding machine.

"Spiral Binding Combs" are set forth in column 1 line 6. The spiral binding combs are cut to specific length (column 1 line 21). It is clear from the disclosure that the intention of the devices for use in transporting the spiral elements from a place of manufacture to a place of use. The container disclosed in the patent is arranged to be transported by a

mechanical transport system (column 4 line 44) where the "transport means" can comprise "rolls or cylinders" (column 4 line 51).

The patent provides no details of the specific machine for manufacture of the spiral elements nor any detail of the specific machine for use of the spiral elements in binding. However it is clear that such machines exist and are known in the art. Even if it is intended that the spiral elements be used in a hand binding process, there can be no novelty nor invention in replacing a hand binding process with simply a machine binding process.

Renz

The operator's manual for the Renz spiral winding and length cutting machine discloses a machine for forming and cutting such spiral elements. This operator's manual was published in July 1990 and the machines themselves have been commercially available for many years.

The date of publication is disclosed in line 5 on the first page and at the bottom of page 9.

It is clear that the machine forms spiral elements on a heating and winding system and includes a cutting system which cuts the spiral elements to length. It is clear that the spiral elements are ejected from the machine although there is no description of the element onto which the spiral elements are discharged. The discharge and the tray onto which the spiral elements are discharged is shown in the photograph on the left of page 13.

The fact that the plastic filament is heated is clear from the document by reference to "heating system" in paragraph 2 and "temperature" in paragraph 5 as well as many other references. It is clear therefore that the plastic filament is heated to a temperature allowing it to be formed and is then discharged.

Reference to cooling is set forth on page 5 at paragraph 2 so that the spiral elements are cooled prior to ejection from the machine.

However it is well known from plastics forming operations that the plastics material is heated to a forming temperature, cooled in the machine to a temperature below the setting temperature and then ejected at a temperature which is generally above ambient temperature. It is well known that it is not necessary to cool the plastic parts to ambient temperature since such cooling would be expensive and lengthy so that such parts are generally in a warm condition when ejected. This is clearly merely a trivial matter well known to any person in the plastics forming industry.

DesJarlais USA

This patent discloses a machine for automatic coil insertion. Such machines therefore are well known. The patent does not mention the source of the coils to be inserted but it is clear that there must be some form of source even if this is merely a container in which the cut-to-length coils are transported.

Reese

This patent discloses a conveyor for transporting materials in which the materials are cooled, where the construction of the conveyor is arranged to provide the required cooling effect.

Graybill

This patent discloses a conveyor system for conveying elements from a manufacturing machine to a use machine where the rate of supply of the conveyor is controlled to provide a predetermined rate of supply to the use machine.

DesJarlais Canada

This Application was filed before the claim date of the Application and thus provides citable prior art. This Application discloses a device for forming coils which are to be used in a binding machine. On page 12 line 5 it is stated that the coils are cooled after winding and before release. On page 15 it is stated that the coils are released onto a tray wherein the material may be stacked or the like. Clearly the coils will cool on the tray depending upon their temperature and the ambient temperature and the amount of time on the tray.

In the litigation in USA, the Applicants interpret the meaning of the term 'conveyor' to include a 'storage tray' structure. While the Protestor does not agree with this overly broad interpretation of the term 'conveyor' and is disputing the same in the United States, the term 'conveyor' interpreted under Applicants' own interpretation in the United States is clearly anticipated by DesJarlais Canada. Based upon Applicants' own interpretation, it is submitted therefore that DesJarlais Canada anticipates at least Claims 2, 16 and 26.

LEGAL CONSIDERATIONS

1. This protest is submitted under Section 34.1 of the Patent Act and consists of patents, applications and printed publications that are believed to have a bearing on the patentability of any claim in the above application for patent.
 2. It is noted from the Manual of Patent Office Practice Chapter 18 paragraph 18.02 that:
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"When the information is available during the pendency of an application, a protest provides an adequate and alternative remedy that should be exhausted by a competitor before seeking judicial review."

It is understood that the Patent Office will not submit information to the Protestor herein relating to the action taken but it is requested that the Protestor be given opportunity to comment on the patentability so that the protest procedure may be "exhausted" as set forth above before any patent is granted.

3. Section 27.4 of the Patent Act states that

"The specification must end with a claim or claims defining distinctly and in explicit terms the subject matter of the invention for which an exclusive privilege or property is claimed"

It is submitted therefore that the claims must be amended so that there is no possibility of ambiguity and no possibility that the Applicants can allege a broader interpretation than the interpretation which they imply during examination and which may be understood by the Examiner to be the correct interpretation. Thus the Public must have clear and unambiguous knowledge of what is included within the claims..

TECHNICAL CONSIDERATIONS

As is well known to any person knowledgeable in the forming of plastics material such as PVC typically used for binding coils, the plastics material must be heated initially to a temperature above a heat deflection temperature or "transition" temperature at which the plastics material changes from a rigid non-plastic condition to a softened formable condition in which it is sufficiently softened to allow it to be plastically deformed. Such "heat deflection temperatures" are well known and established for different plastics materials by Standards such as the ASTM standard test protocol. It is well known that the heat deflection temperature is a specific temperature for the plastics material concerned and above that temperature the material becomes more softened and thus formable as the temperature increases and becomes more rigid as the temperature decreases. In practice the "transition" temperature for PVC is of the order of 60°C.

In order to ensure rapid and complete deformation the plastics material is normally heated to a temperature well above the transition temperature and in practice for PVC this temperature is generally of the order of 100°C.

In order to maintain the shape into which it has been formed in its plastic state, the plastics material must be cooled while the shape is maintained down to a temperature which is sufficiently below the transition temperature to ensure that setting has

occurred. In regard to PVC, the setting temperature is of the order of 40°C. Below that temperature the plastics material is rigid and when deformed is then simply elastically deformed rather than formed in a plastic manner.

Below the setting temperature (of the order of 40°C for PVC), the plastics material can be used in any manner either at that temperature or at ambient temperature. Thus the cooling between the setting temperature and the environment temperature is **completely irrelevant** to the structure or use of the product and the temperature at which it is used simply will depend upon the temperature of the room concerned and the length of time spent in the room.

The cooling, which is of importance in the present matter to the structure of the product and to which the applicant apparently refers, is the cooling through the transition temperature, that is between the higher forming temperature (100°C) and the lower setting temperature (40°C). It is this range to which the Applicants **must be referring** where they allege (incorrectly) that rapid cooling causes "*air bubbles and subsequent brittleness of the plastic coils*".

However the claims of the application are not limited to these temperatures and the claims are ambiguous since they may refer merely to the cooling in the ambient range from 40°C down to 20°C. It is submitted that the claims must be made clear in this regard.

The allegation by the applicant is that "rapid vortex type of isolated cooling taught by the Pfaffle reference" is undesirable since it causes brittleness. It appears therefore that the Applicant is referring to the above cooling range from the forming temperature to the setting temperature. However this is not clear in the claims leaving the claim ambiguous in this regard in that it is open to two possible (broad and narrow) meanings.

From a technical point of view, it is pointed out that, in practice, rapid cooling **does not** provide brittleness of the product and the Renz machine described in the attached prior art document has for many years used rapid cooling (as described in the document). Renz describes a commercial machine which has been on sale since at least 1990 and of course generates acceptable product since otherwise it would not constitute a viable commercial device, as it clearly does.

The whole premise of the slow cooling process proposed by the Applicant is therefore not valid and there is no difference in the resulting product whether it is rapidly cooled or slowly cooled.

In this regard we attach a letter from the supplier of the materials used in the Renz machine that is Georgia Gulf which explains the desirability for rapid cooling of their product and that such rapid cooling does NOT adversely affect the properties. Furthermore, merely on the face of the matter, the Examiner will appreciate that the position of the Applicants is not supported by common sense. In the process of the

Application, if the coils are discharged from the forming process above the transition temperature and are slow cooled from the forming temperature through the transition temperature to the setting temperature on the conveyor, as is implied by the Applicants in their arguments, then the coils are still formable as they are discharged from the forming member and supported on the conveyor. This must lead to the risk or even likelihood that the coils will be deformed from the intended shape during this discharge and transport process.

The question must be raised therefore whether the Applicants are referring to the cooling from the forming temperature through the transition temperature to the setting temperature, as they imply, or whether they are merely referring to the irrelevant cooling stage below the setting temperature from warm to ambient. If the latter, then the "length of the conveyor" is merely irrelevant since the coils will be cooled from say 40°C to some temperature below the discharge temperature and above ambient, depending upon dwell time and this cooling is of no patentable or technical significance.

It is submitted therefore that the whole basis for the argument presented by the Applicants is incorrect, as we have established above, and thus the Applicants should at the very least be called upon to provide evidence in support of their unsupported allegation of the cooling effect.

ANALYSIS OF THE CLAIMS

As set forth above, it is necessary that the claims be clear and unambiguous. For this reason the Manual has set forth that

claims should include "antecedents" for all terms in the claims so that each element is previously defined.

relative terms should be avoided such as "thin", "strong" or the like.

it is particularly important that

"wording should not be so flexible that several interpretations of it are possible, i.e. the claim should not have more than one meaning or be capable of both broad and narrow interpretations"

Bearing in mind these principles, the examiner's attention is directed to the following terms which appear in the claims.

"First higher temperature"

This term is ambiguous and may be capable of both broad and narrow interpretations. The implication in the arguments presented with the patent application is that this

"temperature" is the forming temperature above the transition temperature prior to any cooling effect occurring. The implication is that the cooling of the formed coil occurs as a slow process in a conveyor.

However the Applicants themselves in the US litigation attempt to interpret this term as any temperature which is above ambient temperature. (So that for example the claim may include a situation where the coil cools on the conveyor from 22 C to 20 C).

It is submitted that the applicant should be required to specify that the higher temperature concerned is the temperature above the transition temperature so that the relevant cooling which occurs on the conveyor is limited to that cooling through the transition temperature (that is the cooling which affects the structure of the part). In the absence of such a limitation, it is submitted that the claim is ambiguous and thus must be rejected.

"Conveyor"

The term 'conveyor', particularly when its "length is also referred to, may have an ordinary meaning of an endless belt (or similar moving system) that continuously transports objects and thus has a length along which the objects are transported.

However, Applicants in the US litigation have applied an overly broad meaning to the term 'conveyor' in the United States to include 'storage trays'. The Protestor expects that if a patent is granted in Canada a similar meaning will be applied by Applicants in a patent infringement lawsuit. Hence, the term 'conveyor' is ambiguous under Applicants' own interpretation and needs to be more clearly defined as to its full scope and meaning.

Thus this term is ambiguous and is open to both broad and narrow interpretations. Applicants may present the argument when the Patent is granted that the term "convey" merely has the meaning of "to transport from one place to another". Thus the term "conveyor" is merely an element which so conveys or transports an element from one place to another. The term itself does not specify any particular form of conveyor. If the applicants wish to argue that the claims are distinguished from the prior art by the feature that the "conveyor" is of a nature which is in the form for example of a continuous stream of compartments or a continuous belt, then it is submitted that the Applicants must be required to clearly define this term so that its scope is clear.

"The length of said conveyor"

As set forth above, it is not clear what the Applicants have intended by the term "conveyor". Even if it is assumed that the term "conveyor" is limited to a train of transport elements connected together in an endless loop, the "length" of this "conveyor" is not clear. The term is ambiguous and thus must be clarified. One meaning, which we believe is implied by the applicant but is NOT clearly stated, is that in which the

length concerned is the distance traveled by the coil from the point that it enters onto the moving conveyor to the point where it is discharged from the moving conveyor. It is understood that the Examiner may consider this to be the meaning. However this is NOT the only possible meaning and a properly defined claim with proper antecedents is required to make this clear.

However, if one considers the possibility that the term "conveyor" may include other constructions such as a tray or box or other container, then such a "conveyor" may have many other "lengths" which could be covered by this meaning, such as the length of the tray, box or container.

The word "length" has no antecedent in the claim and thus its definition is not clear and it may have both narrow and broad meanings so that it should be rejected as being ambiguous.

The term is yet further unclear because there is an implication that the length is related to a cooling effect. Any cooling effect would also be controlled by conveyor speed, which is not mentioned. There is also no mention of any difference in "length" necessary for different types of coil. Thus a coil of a thick filament would require much more cooling than a coil of thin filament. The claim is therefore ambiguous and undefined where it refers to a selected length providing a specified cooling effect since a predetermined length may or may not provide a specific cooling effect depending upon many other undefined parameters such as speed and the access of the coils to cooling air.

"Close to Room Temperature"

This term is not clear, particularly bearing in mind that the above "higher temperature" is also not defined.

"Linkage Cooling Conveyor"

This term is apparently simply three unconnected words which provide no definition of the construction concerned. The term "linkage cooling" implies that there is some cooling of a linkage. The term "linkage" provides no definition of the type of conveyor used. The term "cooling" may or may not provide some further definition of the term "conveyor". It may imply that there is some active cooling provided at the conveyor. However this does not appear to be the case in the Application, since the conveyor simply moves through ambient air. As such, the defined conveyor is no different from any other form of conveyor which simply allows the products concerned to be exposed to ambient air and thus the term "cooling" does not further define the type of conveyor. It is not understood what is a "linkage conveyor", is this a conveyor which "conveys linkages"?

This term occurs in claims 3, 4, 5, 7, 9 together with independent claims 18 and 21. It is

therefore an important term and its definition therefore must be unambiguous.

INVALIDITY OF CLAIMS BASED UPON THE PRIOR ART.

Claims 2, 16 and 26

In view of the ambiguity set forth above of these claims, it is difficult to determine whether they are valid. However in view of the possibility that the Applicants will later allege a broad interpretation of these claims, it is necessary to assume such a broad interpretation while assessing the validity of the claims.

The prior art clearly discloses the following items

- a) A coil forming machine forming a plurality of hot plastic spiral coils;
- b) A binding machine for binding cooled spiral coils;
- c) Some form of conveying mechanism which transfers the coils from the forming machine to the binding machine within which cooling will occur.

This is of course disclosed since there must be some form conveyance from one machine to the other in the prior art. Such a conveyance may form simply a tray onto which the products are dropped, a container such as a box into which the products are inserted and a transport mechanism such as a conveyor belt or a forklift truck or a human being which transfers the box to the binding machine. During this transfer, of course the coils will cool in temperature from a higher temperature to room temperature.

These claims, when interpreted broadly, are merely obvious in view of the coil forming of Renz, the binding machine of Desjarlais USA or Spiel and the conveyor of Wasgien. Wasgien discloses a device which receives the formed coils for transport and describes mechanical transport of the carrier on rolls or cylinders. The conveyor (the carrying device or the rolls) disclosed in Wasgien have a "length" since all items have a length. When the coils are carried on the conveyor they will cool from a higher temperature (say 40°C when discharged from a machine) to a lower temperature close to room temperature. This is inherent in the structure and NOT a novel item.

These claims, if interpreted broadly as the Applicants will allege, are therefore invalid as including within their scope a construction which is clearly disclosed in the prior art.

Even if interpreted narrowly concerning the conveyor and its length, the question must be considered of whether the cooling effect relates to the cooling from the forming temperature to the setting temperature or merely from the setting temperature to the ambient, which is of course of no patentable significance.

Claim 1

This claim is merely obvious in view of the known prior art of Renz and Spiel disclosing forming and binding machines together with the prior art of Reese and/or Graybill which disclose conveying devices which transfer elements from a forming machine to a use machine.

The term "at a speed sufficient for the temperature of said plastic coil to lower at ambient air temperature" merely states that the temperature drops in ambient air. While the claim is ambiguous, the claim may include a reduction in temperature from 22°C to 20°C since the claim does not specify the range concerned. Such a drop is in the prior art and NOT patentably significant.

Claim 13

The Examiner has previously cited US Patent 5,890,862 (Spiel) which is prior art as admitted by the Applicant. The features of claims 13 are ALL set forth in claim 1 of Spiel with the exception of

- a) a coil forming machine forming a plurality of hot plastic spiral coils;
- b) a cooler cooling said hot plastic spiral coils;
- f) feeding conveyer means.

The construction of the binding machine is thus identical to that disclosed in Spiel. The above additional items are well known from Pfaffle or from Renz. The term "feeding conveyer means" is ambiguous but could be alleged by the Applicants include any device to effect transfer from the coil forming machine to the binding machine. In Pfaffle this occurs directly. In the prior art exemplified by Renz there must be some such "means" since undoubtedly transfer does occur between the two machines. Even if this had been done solely by human hand, there can be no invention merely in providing a "means" to replace the human hand.

Yet further, Wasgien provides such a "means".

It is submitted therefore that Claim 13 is invalid in view of a combination of the prior art of Spiel and Pfaffle, or Spiel and Renz or Spiel, Renz and Wasgien.

Claims 18 and 21

Each of these claims is merely obvious in view of the above combination of the known forming machine, the known binding machine together with Reese and/or Graybill.

ERRORS AND IMPROPRIETIES IN THE CLAIMS

Claims 2, 16 and 26 are so similar that the differences in scope therebetween are indiscernible. It is submitted therefore that the presence of three substantially identical claims leads to ambiguity in that the claims MUST have different scope to be allowable.

In claim 26, the term "discreet" is improper since its dictionary definition relates to "having or showing discernment of good judgment" and has nothing to do with separated coils.

In claim 2 lines 4 and 5 the words "coil forming binding machine" have no discernable meaning and words appear to be missing.

Claims 19 and 20 apparently should depend from claim 18 (not claim 16) in view of their location and in view of the use of terms which have no antecedent in claim 16.

CONCLUSIONS

It is noted that the Examiner has previously rejected a claim substantially identical to claims 2, 16 and 26 (see claim 27 in the Notice of Action dated July 28th 2003) on the grounds that the claim does not comply with Section 28.3 in that it would have been obvious in view of Pfaffle in view of Spiel. It is submitted that this conclusion was entirely correct and should be maintained.

In reply the Applicants have referred to alleged inadequacies in the cooling effect of Pfaffle. However these allegations are factually incorrect as there is no actual practical disadvantage in rapid cooling. Furthermore the allegations are on their face inconsistent with the process as described in the Application, since the cooling CANNOT occur slowly on the conveyor after discharge from the forming member without modification to the helical formed shape of the coil.

The Applicants have therefore presented no sustainable or supportable argument which overcomes the previous proper conclusion of the Examiner.

Based on the fact that rapid cooling has no detrimental affect on the properties of the PVC plastic, then the Application has no novel attributes to it when compared against the prior Pfaffle patent."

If the Examiner wishes to have any further information concerning any of the above documents or points raised, it is requested that the Examiner contact the undersigned who will be happy to provide any such further information which is

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available or attainable. In particular, if the Examiner wishes to have a copy of the documents from the US litigation in which the Applicants themselves allege a broad interpretation of the claims herein, a copy can be provided.

Respectfully submitted

PER: 

ADE S COMPANY

ADB/dj

January 19, 2004

Enc.(2)

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